

What is claimed is:

1. A heat-sealing device which pushes the tube shape packaging material formed by tube shape from a packaging material web and filled up with liquid food in the tube under the liquid surface of the liquid food, by a seal jaw and a counter jaw, and heat-heals the tube in the tube transversal direction in a seal zone of the packaging material containing a cutting predetermined zone, characterized by that the operation surface of the seal jaw facing the seal zone has a substantially flat surface, and the heat-sealing device has a removal / mixture means on the operation surface of the counter jaw, which removes the seal prevention impurity which may remain to the seal zone from the seal zone, and/or mixes the seal prevention impurity with the melting/softening packaging material of the seal zone.
2. Heat-sealing device of the claim 1 in which the removal/mixture means is a slope provided in the operation surface of the counter jaw.
3. Heat-sealing device of the claim 2 in which the removal/mixture means is a slope of a cross-sectional chevron-shape provided in the operation surface of the counter jaw.
4. Heat-sealing device of the claim 1 in which the removal/mixture means is the ridge continuously or discontinuously provided in the operation surface of the counter jaw.
5. Heat-sealing device of the claim 1 in which the inductor for formation by high frequency induction heating is arranged in the seal jaw, and the packaging material comprises a metal thin layer and a thermoplastic material innermost layer.
6. Heat-sealing device of a claim 1 in which the horn for seal zone formation by ultrasonic heating is arranged to a seal jaw, and the packaging material has at least a thermoplastic material innermost layer.
7. Heat-sealing device of a claim 1 in which the resistance body for seal zone formation by heating is arranged in the seal jaw, and the packaging material has at least a thermoplastic material innermost layer.
8. A filling machine which pushes the tube shape packaging material formed into the tube shape from the packaging material web and filled up liquid food in the tube, by the seal jaw and the counter jaw, and heat-heals the tube in the tube transversal direction in a seal zone of the packaging material containing a cutting predetermined zone, and cuts the tube in the cutting predetermined zone, characterized by having the heat-sealing device of a claim 1.

Adol
A2